

ANNEX 2: COUNTRY CASE STUDIES

SUMMARY OF COUNTRY STUDIES AND OF ARD INDICATORS CURRENTLY IN USE IN EACH COUNTRY

The Annex is divided into two parts. Part 1 consists of a summary of the five country case studies that were used as an integral part of the validation process. Part 2 consists of tables showing the indicators currently in use in each of the five countries.

PART 1 – COUNTRY STUDIES

Country study 1 – Cambodia

The M&E policy environment – There is presently a favourable environment for putting in place a functional monitoring and evaluation (M&E) system in Cambodia. The current National Strategic Development Plan (NSDP) provides clear policy guidelines for the integration and use of an M&E system as a tool for systematically tracking progress of strategic programmes and actions towards achieving goals and objectives of the plan.

Institutional supports for M&E – The Ministry of Planning (MoP) was designated as the lead ministry responsible for: preparing the overall framework outlining the methodology; determining the frequency of reporting; coordinating activities; and consolidating and preparing the NSDP Annual Progress Report. The line ministries/agencies are responsible for monitoring and collecting input and output indicators, while the MoP is in charge of monitoring and evaluating outcome indicators through its periodic surveys undertaken by the National Institute of Statistics (NIS), the only legally and technically competent agency for the collection, processing, management, and presentation of various data on the country. In general, almost all government line ministries/agencies, including the Ministry of Agriculture, Forestry and Fisheries (MAFF) and the Ministry of Rural Development (MRD), have M&E Offices, which are usually placed under the Department of Planning and Statistics of the Ministries.

In the case of MAFF, the Office of Project Coordination and Monitoring and Evaluation (PCMEO) was established in 2004. The system is decentralized, giving all the authority to the implementing departments. The M&E Offices do not have legal authority to directly monitor and evaluate the outputs and outcomes of the activities and projects carried out by implementing departments. Hence, M&E activities are largely limited to the consolidation of reports. The institutional capacity of the M&E Offices is generally underdeveloped. Some constraints faced by implementing agencies include the limited number of staff with limited skills, and a lack of resources and authority.

The indicator system for M&E – In support of the current NSDP Monitoring Framework, a “two-tier structure” indicator system has been adopted. At the national level, the first tier, 43 core indicators have been set, in line with macro-development goals and the Cambodia Millennium Development Goals (CMDGs). At the line ministry/agency level, the second tier, sets of performance indicators have been developed based on the NSDP focus, CMDG indicators under its jurisdiction, and other indicators relevant for sectoral-level monitoring. A third tier of indicators may be added at the ministry/agency level to monitor programme and sub-programme activities.

The country-level development indicators for ARD Programmes – Cambodia’s experience in using the indicator system as a tool for monitoring and evaluating ARD projects is still in its early stage. The institutional capacity and various underpinning infrastructures for an effective development indicator system are still underdeveloped. However, there have recently been significant steps taken to improve the system. Key milestones for the various attempts made to upgrade the system include: the enactment of the Statistics Law; the establishment of the National Statistical System (NSS) and the National Institute of Statistics (NIS) in MoP and the adoption of the Statistical Master Plan (SMP). These highlight the growing need for ample, timely, reliable and quality statistics relevant to development endeavours in the country. To date, notable improvements have been made in the areas of formal structure, management, staff training, dissemination practices and accessibility of data.

The current NSS is: (i) external funding-dependent and donor need-driven; (ii) fragmentary and disorganized, due to lack of agreement of statistical activities and standardized procedures; (iii) General Data Dissemination System (GDDS)-based; and (iv) largely decentralized. The first two features were reported to have imposed many limitations on the development process towards harmonizing official statistics in the country. This is due to a lack of or unstable financial support, which resulted in the piecemeal development of official statistics in the country. Data produced were largely aimed to meet the needs and priorities of external donor programmes, rather than the country’s own perceived needs for relevant and appropriate data for monitoring national programmes. The lack

of consensus on priorities for statistical activities and standardized procedures were said to have caused difficulties with processing, analysis and interpretation. These resulted in a limited use of the data for policy, planning and programme formulation and evaluation.

The key sectors that make up the indicator system to provide economic, social, demographic and environmental statistics include agriculture, health, nutrition, education, commerce and the economy. A relatively large stock of indicators related to these sectors is available in the CAMInfo database produced by NIS of MoP. In addition, e-data of the Economic Institute of Cambodia (EIC), accessible via a prepaid card, is another online source of official statistics and indicators related to the country.

Statistics Law 2005 sets out a clear demarcation of responsibilities and relationships between ministries/agencies that are NSS stakeholders. Pursuant to the law, NIS is responsible for preparing official statistics policies, coordinating, and prioritizing activities, standards and methods necessary for creating an integrated NSS. Various ministries/agencies collect and produce statistics as part of their work. Some data come from administrative systems and others from statistical enquiry.

Based on the NSDP monitoring framework, 26 out of 43 core indicators are to be updated on an annual basis through the collection of administrative statistics. In general, indicators on macroeconomics, the labour force and employment, agriculture and food production, and education and literacy are suggested to be updated and disseminated annually. Most of the health and nutrition indicators are to be disseminated every two years; however, it was suggested that some of these should be disseminated annually.

Hard copy publications have traditionally been the main medium of dissemination for government statistics. To date, the usual hard copy publication known by users is the *Statistics Yearbook* published annually. Other forms of dissemination adopted by the NIS include: (i) Web sites; (ii) CD-ROMs (e.g. CAMInfo CD-ROMs); (iii) e-mail; (iv) the Data User Centre; and (v) the library. Necessary metadata on statistics series explaining the detailed methodologies used for the various statistical collections, periodicity, timeliness and dissemination are accessible on the GDDS Web site.

The lack of guidelines for setting national standards was cited as a major problem with much of the statistics work in Cambodia. The use of different methodologies has caused confusion and difficulties with data analysis and interpretation. For instance, data on income and poverty abound, yet poverty analysts were reported to have difficulties in drawing conclusions from these data. Moreover, there are concerns over the quality, timeliness and reliability of the data, especially those collected through the administrative system. Data gaps were also observed in some key areas such as economic statistics, finance, health, education and agriculture. The lack of financial and human resources has been cited as major constraints in efforts to develop NSS and overall official statistics.

The ARD framework – Results obtained from a series of consultations with a number of experts revealed general agreement on the usefulness of the proposed *Sourcebook* as a toolkit with a wide range of indicators that can be adapted/adopted for ARD programmes. Access, use and satisfaction indicators were all felt to be relevant with respect to the policy, planning and M&E dimension.

The subsector indicators – Findings indicated that almost all indicators proposed in the *Sourcebook* are appropriate and feasible, although nearly half of the indicators were not yet available in the country. The agribusiness and markets, community-based rural development, rural finance and water resources management are the subsectors that have very few indicators proposed in the *Sourcebook* compared to other subsectors.

It is not advisable at the moment, however, to use the findings to draw conclusions on the adequacy or inadequacy of ARD indicators in the country. In fact, an expert in charge of the CAMInfo Unit in MoP confirmed that the current database contains more than 5 indicators, but they are mostly different from the proposed ones. This may not necessarily mean that the country experts have lagged behind in terms of the development and use of indicators; they may simply be different from the proposed ones. Should time permit, a more extensive review would surely provide an even clearer picture on the country-level indicators used in various subsectors.

Data supply for core indicators – Administrative records remain the main sources of data for at least 26 NSDP core indicators that should be collected and monitored on an annual basis. The rest of the core indicators, mostly outcome/impact indicators, are to be supported by data supply from periodic and large surveys/censuses. Important periodic and large surveys/censuses conducted to date include agricultural surveys (e.g. crop cuttings, marketing surveys, and production cost surveys), demographic and health surveys, socio-economic surveys, inter-censal population surveys, child domestic worker surveys, child labour surveys, labour force surveys, industrial establishment surveys and the population census. The CAMInfo database and the *Statistics Yearbook* produced by MoP, and the e-data produced by the Economics Institute of Cambodia are important sources of data and official statistics for the national core indicators and the proposed ones.

To date, it is understood that Cambodia's capacity to supply data for core indicators is still limited, despite significant improvement made as a result of adopting the General Data Dissemination System, the Data Quality Assessment Framework and the integrated dissemination strategy. Data sources are still not adequate to meet the multiple needs of all relevant data users. Considering the context where technical, institutional and financial limitations still prevail, it is believed that there is still a long way to go before Cambodia could become fully

capable of building a system that produces and supplies adequate data for core indicators in line with the international standards.

Conclusions and recommendations – The study’s findings suggested that Cambodia’s experiences related to M&E, statistics and indicator systems are generally limited. Nevertheless, the road ahead is not an impossible journey. A better prospect for an improved capability of the country’s M&E, supported adequately by timely and quality statistics inputs, is imminent, should the following recommendations be taken into consideration:

- The SMP roadmaps should be vigorously pursued.
- A systematic inventory of current indicators used within and outside the national institutions should be conducted.
- Harmonization and standardization of national M&E system should be proactively promoted.
- The M&E Units should be empowered with broadened legal authority and privileges.

The results of the study indicated an acceptance of the proposed Guidelines. In view of further improving the Guidelines, the following recommendations are made:

- Some indicators need to be transferred to appropriate subsectors, including indicators on livestock values/volumes, agricultural imports/exports and forest area.
- Some indicators of significant importance for Cambodia need to be added to the proposed Guidelines, including indicators on agribusiness and markets, community-based rural development, fisheries and aquaculture, forestry, livestock, and policy and strategy.
- Some indicators were considered neither appropriate nor feasible, so it was suggested to delete them from the Guidelines. These included indicators on ARD, agribusiness and markets, and water resources management.
- Modifications of indicators including the simplification of language or insertion/deletion of words used for constructing the indicators need to be made to improve clarity and understanding of indicators by users. It was suggested that some indicators be modified, including those on research and extension, agribusiness and markets, policy and strategy, rural finance and food security.
- The current global initiative to strengthen M&E and indicator systems from the conceptual to implementation level should be expanded. Capacity-building programmes in the areas of M&E and indicator systems development should be considered.

Country study 2 – Nicaragua

The Monitoring and Evaluation (M&E) information systems are designed within a specific institutional framework and according to its particular needs. They cater to the institutions, programmes and projects that they have to evaluate at different levels. Some systems are at the project level, but they are exceptions: they were not considered priorities at the moment of project development and tended to be substituted by the sectoral approach at the time of results-based management.

Basically, two levels, sectoral and the subsectoral, can be identified in the aim to implement monitoring arrangements based on the following indicators.

At the global level, the validity of the use of systems such as the Development Indicators National System (SINASID) depends on its use within a framework of global management by results. But since the country does not have an institutional planning system provided by law and equipped with the suitable technical apparatus for such an aim, there are real limitations to joint programming with the donors, which have continued with respect to the national systems of information in terms of evaluation by outcomes.

The concept of the sectoral M&E system known as the Follow-up and Evaluation System for Learning (SISEVA) was developed within the sectoral approach, together with the construction of a sectoral programme framework, the National Strategy for Productive Rural Development (ENDRP) – ProRural.

There are five components of ProRural. Three refer respectively to forestry, research and innovation, agribusiness and markets. A fourth refers to a combination of several items: rural development, community-based development, sustainable land and crop management, and rural finance. The fifth refers to basic infrastructure development, an item that is not part of the proposed list of indicators.

All national indicators can be found in the list of projects from the Rural Development Institute (IDR) in SISEVA, or in the evaluation frameworks of projects or isolated programmes. Follow-up therefore depends on the information flows from the institutions to SISEVA, which is limited to 30 indicators of early results and limited impacts. The operation of this system depends both on the structural conditions of the sector's institutions (the Agricultural and Rural Public Sector [SPAR]), which are not optimal for the effectiveness of the evaluation exercise; and on the demands of global planning, which are also seriously limited by the lack of a national planning system.

Success in the implementation of the Sector-Wide Approach Programme, as in ProRural, fundamentally depends on the institutional capacity of the sector being implemented. Implementation is a dynamic process that requires coordination, leadership, openness and motivation for change.

For these reasons, both the national and the sectoral level require additional institutional effort and more fluid relationships in both directions. The relationship between the sectoral and the national level is clear, since strategic outcomes of the former must be part of the national objectives.

One important point to mention is the actual restructuring process of ARD policy undertaken by the Nicaraguan Government. This process led to structural changes of the ProRural programme framework to create a new component for food security policy, as well as deep modifications in some of the current ones. These changes were known in the last trimester of 2007, i.e. after the completion of the country report.

Despite being too early to access the indicators due to their not having been reviewed to date, a study of the ARD proposal and the ARD indicators in Nicaragua was conducted using the current logical framework of the major projects and institutions related to rural development.

The key finding related to the data supply situation is that the statistical systems act independently from the evaluation systems, which are fed by institutional records, combined with their own studies and completed through the user surveys or household surveys.

In territorial or focused projects, many of which have already been concluded, one does not resort to national statistics, but rather to own records and ad hoc studies contracted by the project.

The Sectoral Statistical Systems such as that of the Ministry for Agriculture and Forestry (MagFor) serve as a database for National Accounts, but do not provide relevant information for the Ministry's management and planning.

The statistical system could be modified and adapted to the particular demand for analytic information generated by evaluation systems; in fact, its modification and reorganization has already begun, but it is not yet operational. According to the National Strategy of Statistical Development (ENDE), the National Statistical System (SEN) is weak and outdated, and therefore urgently in need of modernization and strengthening.

Finally, a significant aspect worth mentioning is the government's announcement, made in the Validation Seminar, that it intends to integrate this study in the conceptual organization of sectoral information for the National Strategy of Statistical Development being implemented in the country.

Country study 3 – Nigeria

Nigeria has several policy documents that focus on poverty reduction and agriculture growth. These include: the National Economic Empowerment and Development Strategy (NEEDS) 2004 (federal and state versions), which provide an overarching strategy; the National Agricultural Policy (NAP 1988, 2001); the Rural Sector Strategy (RSS); and the Integrated Rural Development Policy Thrust (IRDP) 2004.

The government development strategy is to diversify the productive base of the economy away from the oil and gas sector, and to move towards market-oriented and private sector-driven economic development with strong local participation. Agriculture is seen as an instrument for poverty alleviation.

There are many agencies involved in M&E for ARD – both within the Ministry of Agriculture and externally. It is felt that greater coordination among agencies, leadership and standardization of procedures will enhance M&E results.

The organizations that were projected as possible candidates for leadership of M&E system are: the Plan Coordination Unit of MOA, the National Planning Commission, the National Bureau of Statistics, the Budget Office of Ministry of Finance and the National Poverty Alleviation Programme, among others.

The results of the surveys carried out by the NSO, particularly those relevant to the measurement of outcomes and impacts, are accessible to the M&E system, e.g. MICS, CWIQ and LSMS.

The World Bank, the African Development Bank (AfDB), the International Fund for Agricultural Development (IFAD) and the UK Department for International Development (DFID) are the leading donor agencies. The M&E system for donor-assisted projects tends to be more elaborate than the government-funded projects. The M&E in the entirely government-funded projects is limited to monitoring physical and financial targets.

Funding for the M&E work is an issue. A suggestion was made to make it obligatory to earmark a certain percentage of projects funds for M&E. It was suggested that providing a legal basis for M&E and constituting an independent commission for M&E, on the pattern of Auditor General Office with separate funding, will improve M&E.

M&E results are not commonly used by the Parliament, statesmen and senior officials for decision-making or for resource allocation. There is a need for building the technical capacity of personnel in M&E units in different line departments. In particular, the need was expressed for training in concepts such as the “logical framework”.

The indicators on the list that were identified for reconsideration included: the US\$1 poverty line, carbon sequestration, and increase in employment. It was suggested that an additional indicator, “quality of water in reservoirs”, be added to the list of core indicators. The access, use and satisfaction indicators were generally found useful.

Country study 4 – Senegal

This country study was considered relevant and timely for Senegalese counterparts as the government and partners are engaged in the process of strengthening and rationalizing the country's M&E system for more effectiveness, both at global level and the sector level. Several high-ranking government officials attended the two-day Validation Seminar and actively participated in the discussions.

Senegal, like most African countries, has prepared and adopted a Poverty Reduction Strategy (PRS) as the overall development framework. Given their importance in the economy, ARD subsectors are to contribute significantly to poverty reduction. Projects and programmes in the ARD subsectors are being implemented with a focus on poverty reduction and food security.

A Poverty Monitoring Unit is located in the Ministry of Economy and Finance (MEF), with focal points in line ministries. They work under a National Steering Committee and an Inter-Ministerial Orientation Council chaired by the Prime Minister. However, in parallel to this structure, line ministries have units in charge of studies and planning, with responsibilities for the monitoring, evaluation and statistics of all activities within their own ministries and also of the Medium-Term Expenditure Framework (Cadre de Dépenses Sectorielles à Moyen Terme, CDSMT). These CDSMTs are to some extent articulated within the PRSP. At present, the system seems to have overlapping roles and its functioning is not fully satisfactory. Also, the formulation of the ARD strategies and policy within the overall strategy is not systematically developed. The results of the M&E are not yet used as a basis for budget allocation, which reduces its impact on decision-making at the highest levels.

Furthermore, within the ARD sector, no single unit has the overall responsibility for M&E and statistics, since there are several ministries with their own units with little coordination among them (Agriculture, Livestock, Fisheries, Forestry, etc). As a consequence, there is a diversity of M&E systems and indicators in the sector, and the government and partners have undertaken actions towards their better coordination, standardization and harmonization within the sector. The process is also being mainstreamed with the reform of the NSS and the elaboration of the National Strategy for Development of Statistics (NSDS).

A set of indicators has been selected for monitoring the PRSP, and at the sector level, programmes and projects have logframes and indicators. The assessment of the core indicators proposed in the study with respect to the current situation reveals that a large number of the proposed indicators are relevant and overlap with the indicators selected for PRSP or at the sector level. Overall, out of the 100 indicators proposed in the study, 55 were compiled in Senegal, with censuses/surveys as data sources for 42 indicators. However, the situation varies from one subsector to another and

some of the indicators are neither relevant nor feasible in the country's context. For example, data related to rural finance is very fragmented and very few indicators are actually compiled. The same applies to Community Development Programmes, where the indicators proposed are considered not feasible in Senegal.

Finally, it should be noted that Senegal has undertaken a major reform of its NSS, with the creation of a semi-autonomous National Agency for Statistics and Demography (ANSD) at the core of the system, and the elaboration of a NSDS with sectoral components. This process is an opportunity to better align and rationalize the data and M&E system at the global and sectoral level. Both global and sector activities within NSDS are to be articulated and driven by data requirements for design, implementation, M&E of PRSP and sector development programmes.

Country study 5 – The United Republic of Tanzania

The United Republic of Tanzania has invested a great of effort in defining a framework and mechanisms for an effective and efficient M&E system for tracking the results of its National Strategy for Growth and Reduction of Poverty (MUKUKUTA), which serves as overall development framework. This was done through dialogue and consultations between all stakeholders including the government and development partners. A global M&E structure is in place with a set of clearly defined and regularly monitored indicators and published annual reports. There is also a MUKUKUTA Monitoring Master Plan, which provides a basis for planning and implementing the main statistics operations through a corresponding basket funding.

At the sectoral level, the Tanzanian Government has adopted a sector-wide approach (SWAP) to development, and the agricultural sector development programme (ASDP) is the main tool for the central government for coordinating and monitoring agricultural development and for incorporating nation-wide reforms. The ASDP framework and content have been jointly developed by the four Agricultural Sector Lead Ministries (ASLMs) – the Ministry of Agriculture, Food Security and Cooperatives (MAFC), the Ministry of Industries, Trade and Marketing (MITM), the Ministry of Livestock and the Ministry of Water (MOW) – and the Prime Minister’s Office–Regional Administration and Local Government (PO–RALG), in close consultation with other stakeholders. Under ASDP, an intensive consultation process with all stakeholders has resulted in defining a short and long list of indicators, which are being discussed for the monitoring and evaluation of the programme. In parallel to ASDP, there are still stand-alone projects being implemented in the agriculture and rural sector with their M&E systems. Ultimately, the government aims to have all projects converge to ASDP. Some donors contribute through basket funds, but others persist in traditional funding mechanisms. It is too early to judge how the sector-wide M&E system will work in practice, but all efforts are being made for adopting practical solutions.

An important policy orientation in the United Republic of Tanzania is the Decentralization by Devolution (D by D), in which local governments are being empowered with allocated resources. At this level, a Routine Data System (RDS), mainly using administrative sources, is being developed to complement data coming from censuses and surveys for the monitoring and evaluation of impact and outcome of programmes.

The comparison of the core indicators proposed in the *Sourcebook* against what is currently available shows that many of the indicators in the core menu of indicators do not correspond exactly to the specific project/programme indicators. However, they are similar or close proxies. Also, some indicators were excluded because of the difficulties, both technical and financial, in collecting data or

in compiling data to establish the indicator. Also, the process of formulating indicators is continuous, so that projects/programmes review and/or refine the indicators over time.

The results of the M&E system are highly appreciated by decision-makers, since they are increasingly used as a basis for discussions on budgetary allocations to ministries and local governments. The implication is a growing demand for data with high standards of quality, timeliness and regularity, which is becoming a challenge for the system. There are weaknesses in the system, including the limited capacity of decentralized structures, both for M&E and for basic statistics methodology, concepts and standards. Also, since censuses and surveys are a major data source, the timeliness of the results do not always correspond to the requirements of the M&E system. The high demand is putting great pressure on the National Bureau of Statistics (NBS), which has limited human resources capacity. Therefore, capacity building at all levels, particularly at the decentralized levels, appears to be critical for the effective functioning of the M&E system.

PART 2 – ARD INDICATORS IN USE IN EACH COUNTRY

A common issue in all the workshops was that, even though there was a general consensus that the generic list of indicators was useful and collectable, less than one-third of them were actually available in any single country. The situation in each country is summarized in Table A2.1

Table A2.1 Summary of generic indicators currently available

Subsector	Total indicators	No. of generic indicators currently available				
		Cambodia	Nicaragua	Nigeria	Senegal	The United Republic of Tanzania
A. Core ARD sector indicators	28	8	7	9	8	3
B. Agribusiness and market development	13	2	4	4	3	3
C. Community-based rural development	9		2	4		2
D. Fisheries (aquaculture)	6	3	3	1	1	
E. Forestry	13	5	3	3	5	3
F. Livestock	8	5	5	7	6	2
G. Policies and institutions	18	6	11	11	7	6
H. Research and extension	7	4	3	4		
I. Rural finance	7		5	5		4
J. Sustainable land and crop management	9	6	6	5	2	
K. Water resource management	13	1	7	3	6	4
Total	131	40	56	56	38	27

From the original list of approximately 13 indicators, Nicaragua and Nigeria claim to be producing 56; Senegal, 38; Cambodia, 4; and the United Republic of Tanzania, 27. Each country also provided an additional list of proxy or similar indicators currently available. When compared with the generic list, it was apparent that the gap was actually not large and that many of the alternative or proxy indicators were in fact very close to or even the same as those on the generic list. Nevertheless, the weak capacity of NSSs is still a major constraint to the establishment of effective M&E procedures.

Table A2.2 ARD Indicators available in the five pilot countries

Sector/ subsector			List of available indicators in each test country				
	Class	Indicator	Cambodia	Nicaragua	Nigeria	Senegal	United Republic of Tanzania
A. Core ARD sector indicators							
	Longer term outcome	% change in proportion of rural population below US\$1 per day and below national poverty line	√	√	√	√	
	Early result	% change in cost of transportation of agricultural products					√
	Early result	% of the population employed, underemployed, unemployed	√	√	√		
	Longer term outcome	% of the population with access to safe/improved water	√	√	√	√	
	Longer term outcome	Annual growth of GDP per capita (%)	√	√	√	√	
	Early result	Prevalence of underweight children under five years of age (%)	√	√	√	√	
	Early result	Proportion of malnourished population	√	√	√	√	
	Longer term outcome	Ratio (proportion) of arable land area to total land area (%)	√	√	√	√	
	Longer term outcome	Share of poorest quintile in national income or consumption	√	√	√	√	
	Longer term outcome	Value added in the agricultural sector per agricultural worker		√	√	√	
	Longer term outcome	% change in area under all major crops		√	√	√	
	Early result	% change in value of agricultural imports		√	√		
	Longer term outcome	% change in market share of cooperatives/public-owned enterprises					√
	Early result	% change in number of local businesses opportunities (over a set period)		√	√		
	Longer term outcome	% change in private sector investments in rural areas	√				
	Early result	% of population who consider that they are better off now than 12 months ago			√	√	
	Longer term outcome	Annual growth (%) of income from rural non-agricultural activities	√	√	√	√	
	Early result	Increased share of export price (urban consumer price) realized at the farm gate		√			√
	Longer term outcome	Proportion (or ratio) of total value of agricultural sector exports to total agricultural sector value added		√	√		√

Sector/ subsector	Class	Indicator	List of available indicators in each test country				
			Cambodia	Nicaragua	Nigeria	Senegal	United Republic of Tanzania
B. Agribusiness and Market Development							
Early result		% change in (number, value, volume of activities) managed by agro-enterprises				√	√
Early result		% of farmers who applied/purchased minimum package of inputs during the last season		√	√		
Early result		% of targeted entrepreneurs with access to market information			√		√
Early result		Proportion of (%) agro-enterprises adopting an improved / certified hygiene/food management system		√			
Early result		Proportion of target farmers (by gender) who are members of producer organizations	√				√
Early result		Proportion of producer organizations capable of meeting the production and marketing needs of their members	√		√		
Longer term outcome		% change in value of agricultural inputs (imported and local)		√			
Longer term outcome		Well-functioning food safety surveillance, risk analysis, inspection and testing system		√	√	√	√
C. Community-based rural development							
Early result		Indicators of access, use and satisfaction with community-based rural development services			√		
Early result		% change in number of community associations exercising voting power in local government budget allocation processes		√	√		
Early result		% of target communities that have had a community-based rural development project			√		√
Early result		Proportion of POs/NGOs with functional internal system of checks and balances		√	√		
Early result		% of completed projects still functioning after 3 years			√		√
D. Fisheries (aquaculture)							
Longer term outcome		Annual growth or % change in the availability of fish/ production per capita	√	√	√	√	
Longer term outcome		Annual growth or % change in value of production from aquaculture, by location (country, region, district, etc.)	√	√			

Sector/ subsector	Class	Indicator	List of available indicators in each test country				
			Cambodia	Nicaragua	Nigeria	Senegal	United Republic of Tanzania
E. Forestry							
	Early result	% increase in tax and royalty fees collected from the forest sector	√			√	
	Early result	Annual growth or % change in area under sustainable management (certified forest area, in ha)		√	√	√	√
	Early result	Proportion of forest area under private or communal ownership	√				
	Longer term outcome	% change in country's forested area	√	√	√		√
	Longer term outcome	% of targeted households benefiting from employment in the forest sector					√
	Longer term outcome	Annual growth or % change in rural household income from the forest				√	√
	Longer term outcome	Rate of deforestation	√	√			
	Longer term outcome	Ratio of forested land area to total land area (%)	√		√	√	
F. Livestock							
	Early result	% of target farmers/herders (by gender) aware of improved breeds, feed, veterinary services and range management techniques	√	√	√		√
	Longer term outcome	% change in production/sales of animal products	√	√	√		√
	Longer term outcome	% change in livestock values	√	√	√		√
	Longer term outcome	% change in livestock numbers	√		√		√
	Longer term outcome	Annual growth of animal population	√	√	√	√	√
	Longer term outcome	Livestock birth rate, by species, by area			√	√	
G. Policies and institutions							
	Early result	% change in number of local job opportunities over a set period			√		√
	Early result	Annual growth of food production (%)	√	√	√	√	√
	Longer term outcome	% change in value of agricultural exports		√	√	√	√
	Longer term outcome	Annual growth of income from the agricultural sector (%)	√	√	√		√
	Longer term outcome	Proportion of land poor or landless population to total population (or agricultural population)	√	√			√
	Longer term outcome	Ratio of average income of the richest quintile to the poorest quintile (%)	√	√	√		

Sector/ subsector	Class	Indicator	List of available indicators in each test country				
			Cambodia	Nicaragua	Nigeria	Senegal	United Republic of Tanzania
H. Research and extension							
	Early result	% change in number of smallholders (by gender) who use (apply, adopt) technology advice introduced by the extension system	√	√	√		
	Early result	% of farmers contacted by extension service in the last two weeks	√	√	√		
	Early result	Proportion of target farmers (by gender) providing input to agricultural research system	√	√	√		
	Longer term outcome	% change in yields resulting from use of improved practices	√		√		
I. Rural Finance							
	Early result	% change in number rural population accessing financial products for economic investments		√	√		√
	Early result	% or rural inhabitants using financial services		√	√		√
	Early result	Ratio of borrowers to savers		√	√		
	Longer term outcome	% change in access to formal credit		√	√		√
	Longer term outcome	% change in access to formal credit for women and minority groups		√	√		√
J. Sustainable land and crop management							
	Early result	Proportion of target farmers (women, men) who apply or have adopted sustainable crop production practices in their farms	√	√			
	Early result	Proportion of target farmers aware of sustainable crop production practices, technologies and inputs	√	√	√		
	Longer term outcome	% change in land access for women and minority groups	√	√			
	Longer term outcome	% change in revenues from natural resource use				√	
	Longer term outcome	% change in crop yield	√	√	√		√
	Longer term outcome	% change in formal land transactions	√	√	√		
	Longer term outcome	% reduction of flood risks	√	√	√		√

Sector/ subsector			List of available indicators in each test country				
	Class	Indicator	Cambodia	Nicaragua	Nigeria	Senegal	United Republic of Tanzania
K. Water resource management							
	Early result	% change in number or proportion of target farmers (by gender, tenure, head- and tail-enders) with access to a functioning (reliable, adequate) irrigation and drainage network			√	√	√
	Early result	% change in number or proportion of water users aware of roles and responsibilities of water users association members	√		√		√
	Early result	Proportion of service fees collection to total cost of sustainable water and irrigation activities and functions			√	√	
	Longer term outcome	% change in types of crops grown in all parts of the irrigation and drainage (I&D) system		√		√	
	Longer term outcome	% change in average downstream water flows over the project period during the dry season		√			
	Longer term outcome	% change in crop yields in all parts of the I&D system		√		√	√
	Longer term outcome	% change in cropping intensity in all parts of the I&D system		√		√	
	Longer term outcome	% change in GDP created by irrigated agriculture		√			
	Longer term outcome	% change in soil loss from project watersheds		√			
	Longer term outcome	% of irrigation schemes that are financially self-sufficient		√		√	√

Table A2.3 Alternative and substitute indicators used in the five test countries

Level	Proxies
A. Core ARD sector indicators	
	No. of products traded and publicized on markets, through the radio, leaflets, fairs and web pages
	% of farmers who receive technological assistance that have adopted the recommended practices
	Increase of equity among social groups with respect to food access
	Levels of food production, by category of foods
	Levels of food reserves
	Reduction of illness related to food intake habits
	Volume of crop production (other than rice)
B. Agribusiness and market development	
C. Community-based rural development	
	No. of organizations of youth groups and women who have access to direct financing
	% of women and girls in wage employment (agriculture, industry, services)
	Land tenure security index
	Land titles to farmers (% of total agricultural land)
D. Fisheries (aquaculture)	
	No. of municipal financing institutions that have started to diversify their offer of financial services and microcredit
	% of beneficiaries with access to credit fund who are women
	Credits up to pre-specified target level approved and disbursed
	Domestic credit
	Level of total arrears
	Net lending/net borrowing; saving
E. Forestry	
	Change in area covered by forest and woods
	Fuel wood dependency (% of households)
	% of households with access to common property resources
	% of employed persons in agriculture, hunting and fishing
F. Livestock	
	No proxy indicators were suggested for livestock

Level	Proxies
G. Policies and institutions	
	% improvement in human development and poverty indicators at the municipal level
	% of chronicle undernourishment in children under five years of age
	% of rural families served who have increased their ability to formulate training plans for employment and business
	Change in external trade balance with major partners
	Incidence of disease related to hygiene
	Increase of basic grains production in the Pacific, Central and Northern regions of Nicaragua
	Rural wage rate of unskilled labourers
	Total volume/value of agricultural exports by year
	Total volume/value of agricultural imports by year
	Yields and agricultural productivity
H. Research and extension	
	No. of technological themes disseminated
	% beneficiary groups that implement appropriate technologies for natural resources preservation
	% farms with implanted agroforestry with efficient practices of cattle feeding
I. Rural finance	
	No. of families receiving new financial products from local financial services providers
	No. of non-bank financial services providers strengthened through an institutional support programme
J. Sustainable land and crop management	
	% of rice cultivated area destroyed by drought and flood
	% of households affected by natural calamities
	% of small- and medium-scale farmers that use improved and environmentally friendly productive practices, including diversification
	Environmental quality index at the household level
	Land tenure security index
K. Water resource management	
	% of Farmer Water User Communities (FWUCs) with capacity to operate and maintain their I&D systems
	Irrigated area (% of rice area)